UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,234	03/01/2002	Ajay Kumar	5681-11700	6950

7590   04/21/2006

Robert C Kowert
Conley Rose & Tayon P C
P O Box 398
Austin, TX 78767-0398

EXAMINER
HWANG, JOON H

ART UNIT	PAPER NUMBER
2166	

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/087,234	KUMAR ET AL.
	Examiner	Art Unit	
	Joon H. Hwang	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _23 January 2006_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-11,13-26,28-35 and 37_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-11,13-26,28-35 and 37_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _4/20/05, 11/10/05_.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

1.   The applicants amended claims 31-35 and 37 in the amendment received on

1/23/06.

The pending claims are 1-11, 13-26, 28-35, and 37.

Response to Arguments

2.   Applicant's arguments filed in the amendment received on 1/23/06 have been

fully considered but they are not persuasive.

A. The applicants argue that Montero and Goldick does not teach or suggest a

distributed store configured to provide locked access to the primary state of session

data to a process executing within one of a plurality of application servers and the

distributed store is configured to send a lock token to the process.

The examiner respectfully traverses. In response to applicant's arguments

against the references individually, one cannot show nonobviousness by attacking

references individually where the rejections are based on combinations of references.

See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800

F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that there is no suggestion to combine the

references, the examiner recognizes that obviousness can only be established by

combining or modifying the teachings of the prior art to produce the claimed invention

where there is some teaching, suggestion, or motivation to do so found either in the

references themselves or in the knowledge generally available to one of ordinary skill in

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re*

Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Montero

discloses a common session database (a distributed store) configured to provide

access to the primary state of session data to a process executing within one of a

plurality of application servers (fig. 1, section 35 on page 3, and section 40 on page 4).

Montero teaches a distributed environment since the common session database is

shared by the plurality of application servers (fig. 1). Montero does not explicitly

disclose a locking management of the database. However, Goldick discloses a

resource management in a distributed environment, wherein a plurality of clients shares

the same resource (section 2 on page 1, fig. 1, and fig. 3). Goldick recognizes a

problem in the distributed environment when two or more users modify the same

resource simultaneously such that editions are inadvertently lost (section 5 on page 1).

Thus, Goldick discloses a locking management on a resource of a server system in a

shared resource distributed computing environment (fig. 1, fig. 3, section 5 on page 1,

and sections 24-25 on page 3) in order to prevent the "lost update" problem. Goldick

discloses the server system comprising a resource configured for access by the plurality

of client nodes, wherein the server system is configured to provide locked access to the

resource to one of the plurality of the client nodes, wherein, while the resource is locked

for the node, other nodes cannot access the resource (sections 24-25 on page 3).

Goldick discloses wherein in providing locked access to the resource to the one of the

plurality of the client nodes, the server system is configured to send a lock token to the

node, wherein only the node that have received a lock token can access the resource

(sections 44-45 on page 5 and fig. 3) in order to prevent data inconsistency (section 5 on page 1). Therefore, based on Montero in view of Goldick, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize teaching of Goldick to the system of Montero in order to prevent data inconsistency.

"Test of obviousness is not whether features of secondary reference may be bodily incorporated into primary reference's structure, nor whether claimed invention is expressly suggested in any one or all of references; rather, **test is what combined teachings of references would have suggested to those of ordinary skill in art**." In re Keller, Terry, and Davies, 208 USPQ 871 (CCPA 1981).

"Reason, suggestion, or **motivation to combine two or more prior art references** in single invention **may come from references themselves**, from **knowledge of those skilled in art** that certain references or disclosures in references are known to be of interest in particular field, or from **nature of problem to be solved**;" Pro-Mold and Tool Co. v. Great Lakes Plastics Inc. U.S. Court of Appeals Federal Circuit 37 USPQ2d 1626 Decided February 7, 1996 Nos. 95-1171, -1181.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., **a distributed store** configured to provide locked access to the primary state of session data to a process executing within one of a plurality of application servers and **the distributed store** configured to send a lock token to the process) are not recited in

the rejected claims 17, 20, and 31. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

      B. <u>The applicants argue that Montero, Bennet, Bender, and Eshel do not teach or suggest a distributed store configured to request the process to release the locked access.</u>

      The examiner respectfully traverses. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., **a distributed store** configured to request the process to release the locked access) are not recited in the rejected claims 26-30, 35, and 37. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claims 10-11 and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 recites the limitation "the state of a client session" in line 4. There is

insufficient antecedent basis for this limitation in the claim.

Since claims 11 and 13-16 incorporate the deficiency of claim 10, they are

likewise rejected.

The limitation "that process" in 3rd line of claim 13 is unclear and indefinite.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1, 6, 9, 17, 20, and 31 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Montero et al. (U.S. Publication No. 2002/0143958) in view of

Goldick (U.S. Publication No. 2003/0093457).

With respect to claim 1, Montero discloses a plurality of application servers,

wherein each of the plurality of application servers is configured to access session data,

wherein the session data represents the state of a client session for a client (fig. 1,

abstract, section 11 on page 1, section 26 on pages 2-3, and section 36 on page 3).

Montero discloses a common session database (a distributed store) comprising a

primary state of the session data configured for access by the plurality of application

servers and writes to the database controlled by a processing thread (fig. 1, section 35

on page 3, and section 40 on page 4). Montero does not explicitly disclose a locking

management of the database. However, Goldick discloses a locking management on a

resource of a server system in a shared resource distributed computing environment

(fig. 1, fig. 3, and sections 24-25 on page 3). Goldick discloses the server system

comprising a resource configured for access by the plurality of client nodes, wherein the

server system is configured to provide locked access to the resource to one of the

plurality of the client nodes, wherein, while the resource is locked for the node, other

nodes cannot access the resource (sections 24-25 on page 3). Goldick discloses

wherein in providing locked access to the resource to the one of the plurality of the

client nodes, the server system is configured to send a lock token to the node, wherein

only the node that have received a lock token can access the resource (sections 44-45

on page 5 and fig. 3) in order to prevent data inconsistency (section 5 on page 1).

Therefore, based on Montero in view of Goldick, it would have been obvious to one

having ordinary skill in the art at the time the invention was made to utilize teaching of

Goldick to the system of Montero in order to prevent data inconsistency.

With respect to claim 6, Goldick discloses the server system is configured to

grant the locked access to the one of the client nodes in response to a request for

locked access from the node (sections 44-45 on page 5 and fig. 3). Therefore, the

limitations of claim 6 are rejected in the analysis of claim 1 above, and the claim is

rejected on that basis.

With respect to claim 9, Goldick teaches another node of the plurality of client

nodes is configured to request locked access to the resource from the server system,

and wherein if no node currently holds locked access to the resource, the server system

is configured to provide locked access to the resource to the other node (section 44-45

on page 5 and fig. 3). Therefore, the limitations of claim 9 are rejected in the analysis of

claim 1 above, and the claim is rejected on that basis.

The limitations of claims 17, 20, and 31 are rejected in the analysis of claim 1

above, and these claims are rejected on that basis.

7.   Claims 2-3, 22, and 32 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Montero et al. (U.S. Publication No. 2002/0143958) in view of

Goldick (U.S. Publication No. 2003/0093457), and further in view of Eshel et al. (U.S.

Publication No. 2003/0018785).

With respect to claim 2, Montero and Goldick do not explicitly disclose the

process configured to hold locked access until after receiving a request to release the

locked access. However, Eshel discloses after the node has completed a current

access of a resource, the node is configured to hold locked access until after receiving a

request to release the locked access (sections 11-12 on page 1 and fig. 2) in order to

subsequently access the same resource without requesting additional locked access for

the same resource. Therefore, based on Montero in view of Goldick, and further in view

of Eshel, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to utilize the teaching of Eshel to the system of Montero in

order to subsequently access the same resource without requesting additional locked

access for the same resource.

With respect to claim 3, Goldick further discloses the server system notifies a
node holding a locked access that a break (of the locked access) is about to occur
(section 63 on page 7). Montero and Goldick do not explicitly disclose the distributed
store configured to request the process to release the locked access. However, Eshel
discloses a lock manager configured to request a node holding a locked access to
release the locked access, wherein the node is configured to release the locked access
in response to the request (sections 11-12 on page 1 and fig. 2) in order to provide the
locked access to another node. Therefore, based on Montero in view of Goldick, and
further in view of Eshel, it would have been obvious to one having ordinary skill in the
art at the time the invention was made to utilize the teaching of Eshel to the system of
Montero in order to provide the locked access to another node.

The limitations of claims 22 and 32 are rejected in the analysis of claim 3 above,
and these claims are rejected on that basis.

8.   Claims 4, 7-8, 19, 23-25, and 33-34 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Montero et al. (U.S. Publication No. 2002/0143958) in view of
Goldick (U.S. Publication No. 2003/0093457), and further in view of Bennett (U.S.
Patent No. 5,734,909).

With respect to claim 4, Montero and Goldick disclose the claimed subject matter
as discussed above except releasing the locked access when the process no longer
requires the locked access. However, Bennett teaches the process is configured to
release the locked access when the process no longer requires the locked access to the

resource (the primary state, lines 58-65 in col. 1, lines 7-16 in col. 2, line 54 in col. 3 thru line 14 in col. 4, lines 22-46 in col. 7, and lines 14-35 in col. 8) in order to allow another process to access the resource. Therefore, based on Montero in view of Goldick, and further in view of Bennett, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Bennett to the system of Montero in order to allow another process to access the resource.

With respect to claim 7, Montero and Goldick disclose the claimed subject matter as discussed above except buffering requests. However, Bennett discloses while the process holds the locked access, the central server (the distributed store) is configured to buffer one or more requests for locked access from one or more other processes executing within one or more of the plurality of client nodes (application servers, lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 7-46 in col. 7, lines 53-67 in col. 7, and lines 14-35 in col. 8) in order to award processes with a locked request in the sequence that lock requests arrive. Therefore, based on Montero in view of Goldick, and further in view of Bennett, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Bennett to the system of Montero in order to award processes with a locked request in the sequence that lock requests arrive.

With respect to claim 8, Bennett further teaches if the process release the locked access to the resource (the primary state), the central server (the distributed store) is configured to provide locked access to one of the other processes in response to the other process's buffered request (lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col.

4, lines 7-46 in col. 7, lines 53-67 in col. 7, and lines 14-35 in col. 8). Therefore, the

limitations of claim 8 are rejected in the analysis of claim 7 above, and the claim is

rejected on that basis.

The limitations of claims 19 and 23 are rejected in the analysis of claim 4 above,

and these claims are rejected on that basis.

The limitations of claims 24 and 33 are rejected in the analysis of claim 7 above,

and these claims are rejected on that basis.

The limitations of claims 25 and 34 are rejected in the analysis of claim 8 above,

and these claims are rejected on that basis.

9.   Claims 5, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Montero et al. (U.S. Publication No. 2002/0143958) in view of Goldick (U.S.

Publication No. 2003/0093457), and further in view of Bender et al. (US 2003/0163494

A1).

With respect to claim 5, Montero and Goldick disclose the claimed subject matter

as discussed above except providing locked access to a thread within a process.

However, Bender discloses the process is configured to provide locked access to at

least a portion of a resource to a thread executing within the process, wherein, while the

at least a portion of the resource is locked for the thread, other threads executing within

the process cannot access the at least a portion of the resource (abstract, section 12 on

page 12, sections 33-34 on page 3, sections 37-41 on page 4, and sections 43-45 on

page 5). Therefore, based on Montero in view of Goldick, and further in view of Bender,

it would have been obvious to one having ordinary skill in the art at the time the

invention was made to utilize the thread-level locking mechanism of Bender to the

system of Montero in order to avoid data inconsistency.

The limitations of claims 18 and 21 are rejected in the analysis of claim 5 above,

and these claims are rejected on that basis.

10.   Claims 26, 28-30, 35, and 37 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Montero et al. (U.S. Publication No. 2002/0143958) in view of

Bennett (U.S. Patent No. 5,734,909) and Bender et al. (U.S. Publication No.

2003/0163494 A1), and further in view of Eshel et al. (U.S. Publication No.

2003/0018785).

With respect to claim 26, Montero discloses a process executing within one of a

plurality of application servers, wherein each of the plurality of application servers is

configured to access session data, wherein the session data represents the state of a

client session for a client (fig. 1, abstract, section 11 on page 1, section 26 on pages 2-

3, and section 36 on page 3). Montero discloses a common session database (a

distributed store) comprising a primary state of the session data configured for access

by the plurality of application servers and writes to the database controlled by a

processing thread (fig. 1, section 35 on page 3, and section 40 on page 4). Montero

does not explicitly disclose a locking management of the database. However, Bennett

discloses a locking management on a resource of a central server in a shared resource

distributed computing environment, wherein the resource of the central server is

updated or synchronized with data from clients (abstract, line 15 in col. 1 thru line 30 in

col. 2, and line 8 in col. 3 thru line 60 in col. 4). Bennett discloses the resource

configured for access by the plurality of client nodes, wherein a lock is granted to a

process requesting locked access and executing within one of the plurality of the client

nodes, wherein, while the resource is locked for the process, other processes cannot

access the resource (line 8 in col. 3 thru line 60 in col. 4, and lines 4-20 in col. 7).

Therefore, based on Montero in view of Bennett, it would have been obvious to one

having ordinary skill in the art at the time the invention was made to utilize a resource

locking mechanism of Bennett to the system of Montero in order to avoid data

inconsistencies. Montero and Bennett do not explicitly disclose providing locked access

to a thread within a process. However, Bender discloses the process holding the lock

granting a thread-level lock to a portion of a resource to a thread running within the

process, wherein, while the thread holds the thread-level lock, other threads cannot

access the portion of the resource (abstract, section 12 on page 12, sections 33-34 on

page 3, sections 37-41 on page 4, and sections 43-45 on page 5). Therefore, based on

Montero in view of Bennett, and further in view of Bender, it would have been obvious to

one having ordinary skill in the art at the time the invention was made to utilize the

thread-level locking mechanism of Bender to the system of Montero in order to avoid

data inconsistencies. Montero, Bennett, and Bender do not explicitly disclose

requesting the process to release the locked access. However, Eshel discloses

requesting a node holding a locked access to release the locked access, wherein the

node is configured to release the locked access in response to the request (sections 11-

12 on page 1 and fig. 2) in order to provide the locked access to another node.

Therefore, based on Montero in view of Bennett and Bender, and further in view of

Eshel, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to utilize the teaching of Eshel to the system of Montero in order to

provide the locked access to another node.

With respect to claim 28, Bennett teaches the process is configured to release

the locked access when the process no longer requires the locked access to the

resource (the primary state, lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4,

lines 22-46 in col. 7, and lines 14-35 in col. 8). The limitations are rejected in the

analysis of claim 26 above, and the claim is rejected on that basis.

With respect to claim 29, Bennett discloses while the process holds the locked

access, buffering one or more requests for locked access from one or more other

processes executing within one or more of the plurality of client nodes (application

servers, lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col. 4, lines 7-46 in col. 7,

lines 53-67 in col. 7, and lines 14-35 in col. 8). The limitations are rejected in the

analysis of claim 26 above, and the claim is rejected on that basis.

With respect to claim 30, Bennett teaches if the process release the locked

access to the resource (the primary state), the central server (the distributed store) is

configured to provide locked access to one of the other processes in response to the

other process's buffered request (lines 58-65 in col. 1 line 54 in col. 3 thru line 14 in col.

4, lines 7-46 in col. 7, lines 53-67 in col. 7, and lines 14-35 in col. 8). The limitations are

rejected in the analysis of claim 29 above, and the claim is rejected on that basis.

The limitations of claim 35 are rejected in the analysis of claim 26 above, and the

claim is rejected on that basis.

With respect to claim 37, Bennett teaches the process is configured to release

the locked access when the process no longer requires the locked access to the

resource (the primary state, lines 58-65 in col. 1, line 54 in col. 3 thru line 14 in col. 4,

lines 22-46 in col. 7, and lines 14-35 in col. 8). The limitations are rejected in the

analysis of claim 35 above, and the claim is rejected on that basis.

Allowable Subject Matter

11.   Claim 10 would be allowable if rewritten or amended to overcome the rejection(s)

under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

12.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

13.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Dinker et al. (U.S. Publication No. 2003/0131041) discloses controlling access to

data in a distributed computer system.

14.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joon H. Hwang whose telephone number is 571-272-

4036. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, HOSAIN T. ALAM can be reached on 571-272-39783978. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Joon Hwang
Patent Examiner
Technology Center 2100

4/14/06

JEAN M. CORRIELUS
PRIMARY EXAMINER